FORM PTO-1449 (REV. 7-85) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

# INFORMATION DISCLOSURE CITATION

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ATTY. DOCKET NO. 20757USC18
APPLICATION NO. 10/625,648
APPLICANT Helfetz et al.
FILING DATE July 23, 2003
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| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE |
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| | AA | 5,407,808 | 4/18/95 | Halling et al. | 435 | 34 | 12/20/93 |
| | AB | 5,451,513 | 9/19/95 | Maliga et al. | 435 | 172.3 | 8/25/93 |
| | AC | 5,530,191 | 6/25/96 | Maliga et al. | 800 | 205 | 3/24/94 |
| | AD | 5,545,817 | 8/13/96 | McBride et al. | 800 | 205 | 3/11/94 |
| | AE | 5,576,198 | 11/19/96 | McBride et al. | 435 | 91.3 | 12/14/93 |
| | AF | 5,693,507 | 12/2/97 | Daniell et al. | 435 | 172.3 | 6/20/94 |
| | AG | 5,767,373 | 6/16/98 | Ward et al. | 800 | 205 | 6/6/95 |
| | AH | 5,939,602 | 8/17/99 | Volrath et al | 800 | 300 | 2/28/97 |
| | AI | 6,023,012 | 8/8/00 | Volrath et al. | | | 3/30/98 |
| | AJ | 4,940,835 | 7/10/90 | Shah et al. | 800 | 205 | 7/7/86 |
| | AK | 4,975,374 | 12/4/90 | Goodman et al. | 435 | 172.3 | 2/4/87 |
| | AL | 5,013,659 | 5/7/91 | Bedbrook et al. | 435 | 172.3 | 3/4/88 |

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|---|---|---|---|---|---|---|---|---|
| | AM | 0 332 104 | 9/13/89 | EP | | | ☐ | ☐ |
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| | AQ | 0 479 359 | 4/8/92 | EP | | | ☐ | ☐ |

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| | AR | Al-Hazimi et al., J. Chem. Soc. Perkins Trans. 1. 265-276, 1987 |
| | AS | Allison et al. "Deletion of rpoB reveals a second distinct transcription system in plastids of higher plants" The EMBO Journal, 15:2802-2809 (1996) |
| | AT | Armbruster et al., "Herbicidal Action of Nitrophenyl Pyrazole Ether MON 12800: Immunolocalization, Ultrastructural, and Physiological Studies", Pestice Biochemistry and Physiology, 47: 21-35 (1993). |

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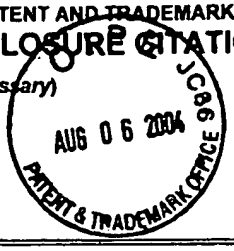


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| | AA2 | 0 589 841 | 3/30/94 | EP | | | ☐ | ☐ |
| | AB2 | WO90/06748 | 6/28/90 | PCT | | | ☐ | ☐ |
| | AC2 | WO91/16440 | 10/31/91 | PCT | | | ☐ | ☐ |
| | AD2 | WO91/19418 | 12/26/91 | PCT | | | ☐ | ☐ |
| | AE2 | WO92/01042 | 1/23/92 | PCT | | | ☐ | ☐ |
| | AF2 | WO95/14099 | 5/26/95 | PCT | | | ☐ | ☐ |
| | AG2 | WO95/16783 | 6/22/95 | PCT | | | ☐ | ☐ |
| | AH2 | WO95/20668 | 8/3/95 | PCT | | | ☐ | ☐ |
| | AI2 | WO95/25787 | 9/28/95 | PCT | | | ☐ | ☐ |
| | AJ2 | WO95/34659 | 12/21/95 | PCT | | | ☐ | ☐ |
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| | AM2 | WO97/04089 | 2/6/97 | PCT | | | ☐ | ☐ |
| | AN2 | WO97/06250 | 2/20/97 | PCT | | | ☐ | ☐ |
| | AO2 | WO97/32011 | 2/27/97 | PCT | | | ☐ | ☐ |
| | AP2 | WO97/32977 | 9/12/97 | PCT | | | ☐ | ☐ |
| | AQ2 | WO 95/24493 | 9/14/95 | PCT | | | ☐ | ☐ |
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| | AB3 | Becerril et al., "Acifluorfen Effects on Intermediates of Chlorophyll Synthesis in Green Cucumber Cotyledon Tissues", Pesticide Biochemistry and Physiology, 35: 119-126 (1989). |
| | AC3 | Bilang et al., "Containing excitement over transplastomic plants," Nature Biotechnology, 16: 333-334 (1998) |
| | AD3 | Brenner et al., "Cloning of murine ferrocheletase", Proc. Natl. Acad. Sci. USA 88: 849-853 (1991). |
| | AE3 | Brenner et al., "A FLUOROMETRIC ASSAY FOR MEASUREMENT OF PROTOPORPHYRINOGEN OXIDASE ACTIVITY IN MAMMALIAN TISSUE", Clinica Chimica Acta, 100: 259-266 (1980). |
| | AF3 | Camadro et al., "A NEW ASSAY FOR PROTOPORPHYRINOGEN OXIDASE - EVIDENCE FOR A TOTAL DEFICIENCY IN THAT ACTIVITY IN A HEME-LESS MUTANT OF SACCHAROMYCES CEREVISIAE", Biochemical and Biophysical Research Communications, 106(3): 724-730 (1982). |
| | AG3 | Camadro et al., "Cloning and Characterization of the Yeast HEM14 Gene Codoing for Protoporphyrinogen Oxidase, the Molecular Target of Diphenyl Ether-type Herbicides", The Journal of Biological Chemistry, 271(15): 9120-9128 (1996). |
| | AH3 | Camadro et al., "MOLECULAR PROPERTIES OF YEAST AND LETTUCE PROTOPORPHYRINOGEN OXIDASES", ABSTRACT PAP AM CHEM. SOC., 111. (1-2) (1993). |
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| | AJ3 | Camadro et al., The Journal of Biological Chemistry, 269(51): 32085-32091 (1994). |
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| | AL3 | Che et al., "Localization of Target-Site of the Protoporphyrinogen Oxidase-Inhibiting Herbicide S-23142 in Spinacia-oleracea L.", Z. Naturforsch., 48(c): 350-355 (1993). |
| | AM3 | Clarke et al. "Identification and expression of the chloroplast clpP gene in the conifer Pinus contorta" Plant Molecular Biology, 26: 851-862 (1994) |
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| | AA4 | Crews et al., "SYNTHESIS AND HERBICIDAL ACTIVITY OF bis-ARYLOXYBENZENES, A NEW CLASS OF PROTOX INHIBITORS", Abstracts of Papers American Chemical Society, Abstract #044. 209(1-2) (1995). |
| | AB4 | Dailey et al., "Expression of a Cloned Protoporphyrinogen Oxidase", The Journal of Biological Chemistry, 269(2):813-815 (1994) |
| | AC4 | Dailey T.A. et al., "Cloning, Sequence, and Expression of Mouse Protoporphyrinogen Oxidase", Archives of Biochemistry and Biophysics, 324(2): 379-384 (1995). |
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| | AE4 | Daniell et al., "Containment of herbicide resistance through genetic engineering of the chloroplast genome," Nature Biotechnology, 16: 345-348 (1998) |
| | AF4 | Datta et al., "Transformation of the Tobacco Chloroplast Genome with the aroA Gene to Confer Glyphosate Tolerance," Supplement to Plant Physiology, 111(2): 790 (1996) |
| | AG4 | Derrick, Peter Michael, "An investigation into the mode of action of the herbicide M&B 39279", Dissertation Abstracts International, 50(10): 4283-B (1996). |
| | AH4 | Deybach et al., "The mitochondrial location of protoporphyrinogen oxidase", Eur. J. Biochem., 149(2): 431-436 (1985). |
| | AI4 | Duke et al., "Porphyric Pesticides Chemistry, Toxicology, and Pharmaceutical Applications", ACS Symposium Series 559, American Chemical Society, 1-318 (1994). |
| | AJ4 | Duke et al., "Protoporphyrinogen Oxidase-Inhibiting Herbicides", Weed Science, 39: 465-473 (1991). |
| | AK4 | Duke et al., "Protoporphyrinogen Oxidase as the Optimal Herbicide Site in the Porphyrin Pathway", ACS SYMP. SER. - Porphyric Pesticides 191-204 (1994) |
| | AL4 | Duke et al., "PROSPECTS FOR HERBICIDES DESIGNED FOR SITES OF ACTION IN THE PORPHYRIN PATHWAY BEYOND PROTOPORPHYRINOGEN OXIDASE", Abstracts of Papers American Chemical Society, Abstract #129, 206(1-2) (1993). |
| | AM4 | Duke, S.O., "PESTICIDES THAT ACT THROUGH PROPHYRIN ACCUMULATION", Abstracts of the 22nd Annual Meeting of the American Society for Photobiology, Abstract #SPM-B2, 59 (Spec. Issue) (1994). |
| | AN4 | Elder et al., "A Radiochemical Method for the Measurement of Coproporphyrinogen Oxidase and the Utilization of Substrates other than Coproporphyrinogen III by the Enzyme from Rat Liver", Biochem. J., 169: 205-214 (1978). |

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| | AA5 | Ems et al. "Transcription, splicing and editing of plastid RNAs in the nonphotosynthetic plant Epifagus virginiana" Plant Molecular Biology, 29: 721-733 (1995) |
| | AB5 | EMBL SEQUENCE DATABASE ACC. NO M22063 REL. 19 22-APR-1989 |
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| | AD5 | Falbel et al., "Characterization of a Family of Chlorophyll-Deficient Wheat (Triticum) and Barley (Hordeum vulgare) Mutants with Defects in the Magnesium-Insertion Step of Chlorophyll Biosynthesis", Plant Physiology (Rockville), 104: 639-648 (1994). |
| | AE5 | Ferreira et al., "Organization of the Terminal Two Enzymes of the Heme Biosynthetic Pathway ORIENTATION OF PROTOPORPHYRINOGEN OXIDASE AND EVIDENCE FOR A MEMBRANE COMPLEX*", The Journal of Biolocial Chemistry, 263(8): 3835-3839 (1988). |
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| | AG5 | Gollub et al., "Yeast Mutants Deficient in Heme Biosynthesis and a Heme Mutant Additionally Blocked in Cyclization of 2 3 Oxidosqualene*", The Journal of Biological Chemistry, 252(9): 2846-2854 (1977). |
| | AH5 | Guo et al., "High-performance liquid chromatographic assays for protoporphyrinogen oidase and ferrochelatase in human leukocytes", Journal of Chromatography Biomedical Applications, 566: 383-396 (1991). |
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| | AJ5 | Hansson et al., "Bacillus subtilis Hem Y Is a Peripheral Membrane Protein Essential for Protoheme IX Synthesis Which Can Oxidize Coproporphyrinogen III and Protoporphyrinogen IX", Journal of Bacteriology, 176(19): 5962-5970 (1994). |
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| | AL5 | Heifetz et al., "Chemical regulation of nuclear and plastid transgenes in plants," Supplement to Plant Physiology, 114(3): 308 (1997) |
| | AM5 | Huang et al. "The Chlamydomonas chloroplast clpP gene contains translated large insertion sequences and is essential for cell growth" Mol Gen Genet, 244: 151-159 (1994) |
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| | AB6 | Iida et al., "Isomerization and Peroxidizing Phytotoxicity of Thiadiazolidine-thione Compounds", Z. Naturforsch., 50(c): 186-192 (1995). |
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| | AD7 | Kataoka et al., "Isolation and Partial Characterization of Mutant Chlamydomas reinhardtii Resistant to Herbicide S-23142", J. Pesticide Sci., 15:499-451(1990) |
| | AE7 | Klemm et al., "Protoporphyrinogen oxidation coupled to nitrite reduction with membranes from Desulfovibrio-gigas", FEMS Microbiology Letters, 61: 61-64 (1989). |
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| | AK7 | Labbe-Bois R., "The Ferrochetelase from Saccharomyces-Cerevisiae. SEQUENCE, DISRUPTION, AND EXPRESSION OF ITS STRUCTURAL GENE HEM15*", The Journal of Biological Chemistry, 265(13): 7278-7283 (1990). |
| | AL7 | Labbe et al., "Fluorometric assays for coproporphyrinogen oxidase and protoporphyrinogen oxidase", Analytical Biochemistry, 149: 248-260 (1985). |
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| | AA8 | Lee H.J. et al., "Protoporphyrinogen IX-Oxidizing Activities Involved in the Mode of Action of Peroxidizing Herbicides", Journal of Agricultural and Food Chemistry, 42(11): 2610-2618 (1994). |
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